

I CLAIM:

1. A cartridge-type wellbore screen comprising: a cylindrical wall including a first end, a second end opposite the first end, an inner surface defining an inner diameter of the wellbore screen, the inner diameter being open from the first end to the second end, and an outer surface; an opening to the inner diameter through the cylindrical wall the opening extending between the outer surface and the inner surface to provide fluid access from the outer surface to the inner diameter; a fluid filtering material positioned to filter oversize particles from passing through the opening; and a fluid tracing material carried by the wellbore tubular and mounted at a mounting site spaced from the opening to the inner diameter and outwardly of the inner diameter, the mounting site being positioned such that a fluid flow path is restricted to be from the mounting site, along the outer surface and through the opening before entering the inner diameter.
2. The cartridge-type wellbore screen of claim 1 wherein the first end and the second end are each threaded for connection to adjacent wellbore tubulars.
3. The cartridge-type wellbore screen of claim 1 wherein the mounting site is formed as an open topped pocket on the outer surface.
4. The cartridge-type wellbore screen of claim 1 wherein the mounting site and the opening are similarly formed, except the mounting site is closed at its floor to stop fluid communication therethrough to the inner diameter.
5. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing materials include a tracer embedded in a carrier.
6. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing materials are incorporated into a filter cartridge.
7. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing material is for water tracing.

8. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing material is for hydrocarbon tracing.
9. The cartridge-type wellbore screen of claim 1 further comprising a second fluid tracing material and wherein the fluid tracing material is either a hydrocarbon tracing material or a water tracing material and the second fluid tracing material is the other of a hydrocarbon tracing material or a water tracing material.
10. A method for monitoring fluid production in a well, the well extending from ground surface into a formation, the method comprising: installing cartridge-type wellbore screen in the well, the cartridge-type wellbore screen including a first end, a second end opposite the first end, a cylindrical wall including an inner surface defining an inner diameter of the wellbore screen, the inner diameter being open from the first end to the second end, and an outer surface; an opening through the cylindrical wall providing access between the outer surface and the inner diameter; a fluid filtering material positioned to filter oversize particles from passing through the opening; a fluid tracing material carried by the wellbore tubular and mounted at a mounting site spaced from the opening to the inner diameter and outwardly of the inner diameter, the mounting site being positioned such that a fluid flow path is restricted to be from the mounting site, along the outer surface and through the opening before entering the inner diameter; allowing a flow of a fluid past the fluid tracing material, along the outer surface and through the opening to the inner diameter, the fluid picking up a tracer from the fluid tracing material; allowing the fluid to move through the inner diameter to surface; and monitoring the fluid arriving at surface for the presence of the tracer.
11. The method of claim 10 wherein installing includes connecting the wellbore screen into a tubular string and running the wellbore screen into a position in the well.

12. The method of claim 10 wherein allowing a flow of a fluid includes filtering the flow of the fluid as it passes through the opening, while the tracer remains entrained therein.
- 5 13. The method of claim 10 further comprising allowing fluid produced downhole of the screen to pass through the inner diameter without having tracer entrained therein.
14. The method of claim 10 further comprising monitoring the fluid arriving at surface for the presence of a second tracer mounted on the outer surface of another wellbore screen in the well.
- 10 15. The method of claim 10 wherein the mounting site is formed as an open topped pocket on the outer surface.
16. The method of claim 10 wherein the fluid tracing materials include a tracer embedded in a carrier.
- 15 17. The method of claim 10 wherein the fluid tracing materials are incorporated into a filter cartridge.
18. The method of claim 10 wherein the fluid tracing material is for water tracing.
19. The method of claim 10 wherein the fluid tracing material is for hydrocarbon tracing.
- 20 20. The method of claim 10 further comprising a second fluid tracing material on the outer surface and wherein the fluid tracing material is either a hydrocarbon tracing material or a water tracing material and the second fluid tracing material is the other of a hydrocarbon tracing material or a water tracing material.

I CLAIM:

1. A cartridge-type wellbore screen comprising: a cylindrical wall including a first end, a second end opposite the first end, an inner surface defining an inner diameter of the wellbore screen, the inner diameter being open from the first
5 end to the second end, and an outer surface; an opening to the inner diameter through the cylindrical wall the opening extending between the outer surface and the inner surface to provide fluid access from the outer surface to the inner diameter; a fluid filtering material positioned to filter oversize particles from passing through the opening; and a fluid tracing material carried by the
10 wellbore tubular and mounted at a mounting site spaced from the opening to the inner diameter and outwardly of the inner diameter, the mounting site being positioned such that a fluid flow path is restricted to be from the mounting site, along the outer surface and through the opening before entering the inner diameter, wherein the mounting site and the opening are similarly
15 formed, except the mounting site is closed at its floor to stop fluid communication therethrough to the inner diameter.
2. The cartridge-type wellbore screen of claim 1 wherein the first end and the second end are each threaded for connection to adjacent wellbore tubulars.
3. The cartridge-type wellbore screen of claim 1 wherein the mounting site is
20 formed as an open topped pocket on the outer surface.
4. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing materials include a tracer embedded in a carrier.
5. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing materials are incorporated into a filter cartridge.
- 25 6. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing material is for water tracing.
7. The cartridge-type wellbore screen of claim 1 wherein the fluid tracing material is for hydrocarbon tracing.

- 5 8. The cartridge-type wellbore screen of claim 1 further comprising a second fluid tracing material and wherein the fluid tracing material is either a hydrocarbon tracing material or a water tracing material and the second fluid tracing material is the other of a hydrocarbon tracing material or a water tracing material.
- 10 9. A method for monitoring fluid production in a well, the well extending from ground surface into a formation, the method comprising: installing cartridge-type wellbore screen in the well, the cartridge-type wellbore screen including a first end, a second end opposite the first end, a cylindrical wall including an inner surface defining an inner diameter of the wellbore screen, the inner diameter being open from the first end to the second end, and an outer surface; an opening through the cylindrical wall providing access between the outer surface and the inner diameter; a fluid filtering material positioned to filter
15 oversize particles from passing through the opening; a fluid tracing material carried by the wellbore tubular and mounted at a mounting site spaced from the opening to the inner diameter and outwardly of the inner diameter, wherein the mounting site and the opening are similarly formed, except the mounting site is closed at its floor to stop fluid communication therethrough to the inner diameter and the mounting site being positioned such that a fluid flow path is
20 restricted to be from the mounting site, along the outer surface and through the opening before entering the inner diameter; allowing a flow of a fluid past the fluid tracing material, along the outer surface and through the opening to the inner diameter, the fluid picking up a tracer from the fluid tracing material; allowing the fluid to move through the inner diameter to surface; and
25 monitoring the fluid arriving at surface for the presence of the tracer.
10. The method of claim 9 wherein installing includes connecting the wellbore screen into a tubular string and running the wellbore screen into a position in the well.
- 30 11. The method of claim 9 wherein allowing a flow of a fluid includes filtering the flow of the fluid as it passes through the opening, while the tracer remains entrained therein.

12. The method of claim 9 further comprising allowing fluid produced downhole of the screen to pass through the inner diameter without having tracer entrained therein.
- 5 13. The method of claim 9 further comprising monitoring the fluid arriving at surface for the presence of a second tracer mounted on the outer surface of another wellbore screen in the well.
14. The method of claim 9 wherein the mounting site is formed as an open topped pocket on the outer surface.
- 10 15. The method of claim 9 wherein the fluid tracing materials include a tracer embedded in a carrier.
16. The method of claim 9 wherein the fluid tracing materials are incorporated into a filter cartridge.
17. The method of claim 9 wherein the fluid tracing material is for water tracing.
- 15 18. The method of claim 9 wherein the fluid tracing material is for hydrocarbon tracing.
- 20 19. The method of claim 9 further comprising a second fluid tracing material on the outer surface and wherein the fluid tracing material is either a hydrocarbon tracing material or a water tracing material and the second fluid tracing material is the other of a hydrocarbon tracing material or a water tracing material.